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EXAMINER

JONES, SCOTT E

ART UNIT

PAPER NUMBER

3713

DATE MAILED: 07/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/814,638

Applicant(s)

MATTICE ET AL.

Examiner

Scott E. Jones

Art Unit

3713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because it exceeds 150 words as required by 37 C.F.R. § 1.72(b). Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 21, the term, “(N)2<sup>x</sup> bits” is not defined in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11, 32, 33 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. In claim 11, lines 2 and 3, the language, “a portion” is indefinite. It is not clear how “a portion” of an output signal is defined.

7. Claims 32 and 33 have the same deficiency as noted above in item No. 4.

8. Claim 35 recites the limitation "the next data message" in line 4. There is insufficient antecedent basis for this limitation in the claim.

9. Applicant should review the claims and submit corrections for these and any other deficiencies found.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 4-9, 11, 13-14, 16-17, 19-20, 24-25, 27, 29, and 31-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Warrior et al. (U.S. 5,333,114).

Warrior et al. discloses a smart field-mounted control unit for controlling a process, receiving/sensing signals and sending/outputting signals to control devices over a two-wire circuit which powers the control unit. Warrior et al. additionally discloses :

Regarding claims 1, 13, 24, 29, 31, and 35:

- a plurality of devices (64)(68)(62) to be individually accessed (Figure 2);
- a host controller (36) having a data out terminal and a common terminal (Figure 1);
- a plurality of local controllers (10) being interconnected in a string with the data out terminal, a power terminal, a common terminal, and plural device terminals (Figure 1);
- the controllers are serially connected in a daisy chain configuration with the data out terminal of the host controller being connected to the data in terminal of a first local controller and the data in terminal of each of the other local controllers being

connected to the data out terminal of the preceding local controller (Figure 2 and Column 3, line 64-Column 4, line 7);

- each local controller (10) having its device terminals respectively connected to the individual ones of the devices (Figure 1);
- a power line (12) interconnecting the power terminals of the host controller and all of the local controllers (Figure 1, 2);
- a common line interconnecting the common terminals of the host controller and all of the local controllers (Figure 1, 2).

Regarding Claims 4, 14, and 25:

- each of the local controllers is a microcontroller (Column 3, line 56).

Regarding Claims 5, and 24:

- the host controller includes a data in terminal, the data out terminal of the last node being connected to the data in terminal of the host controller (Figure 2 and Column 3, line 64-Column 4, line 7).

Regarding Claims 6, 19, and 34:

- at least one of the devices is a device having states which are to be detected. The temperature transmitter (68) senses the absolute temperature of fluid (2) via a thermocouple (69) (Figure 2).

Regarding Claims 7, and 20:

- at least one of the devices is a switch (Figure 2). A switch is used in device (26) to open/close control valve (62) by letting instrument air in/out of the valve actuator via instrument air line (59) (Column 6, line 61-Column 7, line 5).

Regarding Claim 8:

- the host controller includes means for producing at its data output signal comprising a serial digital data stream directed to all of the nodes (Column 2, line 16-Column 4, line 7).

Regarding Claims 9, 17, and 36:

- the devices include at least one device (62) having states which are to be controlled, the output signal including data for controlling states of the at least one device (Figure 2).

Regarding Claim 16, 27, and 33:

- the serial digital data stream comprises binary data. Digital data comprising binary data is inherent to computer systems.

Regarding Claims 15 and 26:

- N is 4 (Figure 2).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2, 3, 10, 12, 18, 23, 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warrior et al. (U.S. 5,333,114) in view of Canterbury et al. (U.S. 6,117,010).

Warrior et al. discloses that as discussed above regarding claims 1, 4-9, 11, 13-14, 15-17, 19-20, 24-26, 27, 29, and 31-36. Warrior et al. seems to lack explicitly disclosing:

Regarding Claim 2:

- the devices include optical devices.

Regarding Claims 3, 10, and 18:

- each of the optical devices is an LED.

Regarding Claims 12, 23, and 30:

- all of the devices are associated with a single gaming machine.

Regarding Claim 28:

- each of the first devices is a switch and each of the second devices is an LED.

Canterbury et al., like Warrior, teaches of a computer control system used to control electronic/electromechanical devices. A printed circuit board carries a plurality of light sources and a plurality of switches switchable between an actuated condition and a non-actuated condition. The input/output microcontroller is mounted to the printed circuit board and connected to the game control unit by serial link. The microprocessor is coupled to the switches to inform the game control unit of the condition of each of the switches. The microcontroller is coupled to the light sources (LED's) to turn them on and off. Canterbury et al. teaches:

Regarding Claim 2:

- the devices include optical devices (60) (Figures 4 and 5).

Regarding Claims 3, 10, and 18:

- each of the optical devices is an LED (60) (Figures 4 and 5).

Regarding Claims 12, 23, and 30:

- all of the devices are associated with a single gaming machine (Column 1, lines 5-9, and Column 2, lines 31-52).

Regarding Claim 28:

- each of the first devices is a switch (64) and each of the second devices is an LED (60) (Figure 5).

It would have been obvious to one having ordinary skill in the art, at the time of the applicant's invention, to incorporate Canterbury's printed circuit board configuration feature in Warrior's control unit. Doing so would enable an operator to reduce the overall wiring in the control system and increase the rate at which process data is obtained by the master controller.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Emerson Process Fieldbus wiring methods, McGlone et al. '900, Nixon et al. '368, McCauley '392, Stockdale et al. '014, Steger et al. '987, Brown '281, Eryurek '448, Tiedeken '076, LaDue '808, Nixon et al. '591, and Acres et al. '459 disclose network distributed control systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott E. Jones whose telephone number is (703) 308-7133. The examiner can normally be reached on Monday - Friday, 8:30 A.M. - 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on (703) 308-4119. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.



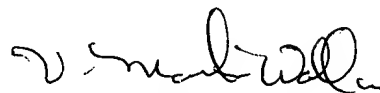
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

Scott E. Jones  
Examiner  
Art Unit 3713

SET

sej  
July 16, 2002



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